UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,020	01/15/2002	Ari Tourunen	P 290450 2010028US/SM L/k	7874

			EXAMINER
909 7590 07/19/2007			MATTIS, JASON E

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/045,020	TOURUNEN ET AL.
Office Action Summary	Examiner	Art Unit	
	Jason E. Mattis	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 April 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-12,14-19 and 21-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-12,14-18 and 21-26* is/are rejected.

7)☒ Claim(s) *3 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-SB/08) Paper No(s)/Mail Date _____

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is in response to the Request for Continued Examination filed

4/26/07.. Claims 4, 13, and 20 have been cancelled. Claims 1-3, 5-12, 14-19, and 21-

26 are currently pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-2, 5-6, 10-12, 15-18, 21-22, and 26 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Irvin et al. (U.S. Pat. 6381713 B1) in view of Ojard et al.

(U.S. Pat. 6266350 B1) and Sydanmaa et al. (U.S. Pat. 6687670 B2).

With respect to claims 1, 11, and 15-17, Irvin et al. discloses a packet radio

system including a mobile station apparatus and method for arranging error control of

packet-switched data **(See the abstract, column 11 line 42 to column 12 line 11, and

Figure 1 of Irvin et al. for reference to a wireless packet data system including

mobile stations that operates a method of arranging error control of packets that**

are separated into different fields). Irvin et al. also discloses selecting during

connection set-up conditions that apply for the processing of the first part and the

second part in an error situation **(See column 6 lines 20-67 and Figure 3 of Irvin et al.**

for reference to determining and cataloging conditions to use for processing data

packets that have errors in a specified packet data field with the some conditions

being based on the time of a data session, the locations of devices, the identities

of devices, quality of service, and grade of service considerations, which are all

determined at the time of connection set-up). Irvin et al. further discloses detecting

errors in received data **(See column 7 lines 1-11 and Figure 4 of Irvin et al. for**

reference to determining which, if any, fields or portions of information in a

received packet are flawed). Irvin et al. also discloses checking whether conditions to

allow an erroneous first and/or second part to be transmitted to upper protocol layers

(See column 7 lines 12-35 and Figure 4 of Irvin et al. for reference to determining

if the location of the error allows the packet to be passed up the protocol stack).

Irvin et al. further discloses transmitting the packet to the upper protocol layers in

response to conditions allowing it **(See column 7 lines 12-35 and Figure 4 of Irvin et**

al. for reference to passing a packet up the protocol stack if conditions allow for

it). Irvin et al. does not disclose that the first and second part are separated and

transmitted on different logical channels. Irvine et al. also does not specifically disclose

that only the first part or the second part is transmitted to the upper protocol layers in

response to conditions allowing it.

With respect to claims 1, 11, and 15-17, Ojard et al., in the field of communications, discloses separating a first and second part of a packet and transmitting the parts on different logical channels **(See column 9 lines 29-44 of Ojard et al. for reference to separating a header part and a payload part of a packet and transmitting the header in a separate sub-channel from the payload)**. Separating a first and second part of a packet and transmitting the parts on different logical channels has the advantage of allowing a change in the data of one of the parts to not effect the data rate and transmission quality of the other part, since the two parts are transmitted on separate channels.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ojard et al., to combine separating a first and second part of a packet and transmitting the parts on different logical channels, as suggested by Ojard et al., with the system and method of Irvin et al., with the motivation being to allow a change in the data of one of the parts to not effect the data rate and transmission quality of the other part, since the two parts are transmitted on separate channels.

With respect to claims 1, 11, and 15-17, Sydanmaa et al., in the field of communications, discloses transmitting only the first part or the second part of a packet to upper protocol layers for processing in response to conditions allowing it (See column 8 lines 8-41, column 10 line 44 to column 11 line 16, and Figure 6 of Sydanmaa et al. for reference to a system and method for determining that a specific part of a packet is erroneous, discarding the erroneous part and replacing it with better data, and

transmitting the packet with replaced data for processing such that only the

unerroneous part of the original packet is transmitted for processing). Transmitting only

the first part or the second part of a packet to upper protocol layers for processing in

response to conditions allowing it has the advantage of allowing a part of a packet with

no errors to be processed and used while suppressing an erroneous part of a packet

such that it is not processed and used.

It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Sydanmaa et al., to combine transmitting

only the first part or the second part of a packet to upper protocol layers for processing

in response to conditions allowing it, as suggested by Sydanmaa et al., with the system

and method of Irvin et al. and Ojard et al., with the motivation being to allow a part of a

packet with no errors to be processed and used while suppressing an erroneous part of

a packet such that it is not processed and used.

With respect to claims 2, 12 and 18, Irvin et al. discloses that the first part

comprises header fields and the second part comprise payload data **(See column 6**

lines 1-19 and Figure 3 of Irvin et al. for reference to a packet being divided into

header fields 320 and a payload 350).

With respect to claims 5 and 21, Irvin et al. discloses indicating to upper layers

an error detected in the first and/or second part of the packets **(See column 7 lines 1-**

11 and Figure 4 of Irvin et al. for reference to indicating detection of an error and

the location of the detected error in steps 430 and 460).

With respect to claims 6 and 22, Irvin et al. discloses that an error indication is added to erroneous data units and it is checked whether the data units meet the conditions **(See column 7 lines 1-11 and Figure 4 of Irvin et al. for reference to indicating detection of an error and the location of the detected error in steps 430 and 460 and for reference to determining whether conditions allowing the packet to be passed up the protocol stack are met).**

With respect to claims 10 and 26, Irvin et al. discloses that different conditions apply for the mobile station a mobile station than for a network element **(See column 6 lines 20-59 for reference to the conditions being set in a database that may be different for each processing unit).**

4.   Claims 7, 8, 14, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irvin et al. in view of Ojard et al. and Sydanmaa et al. and in further view of Shin (U.S. Pat. 6738634).

With respect to claims 7, 14, and 23, the combination of Irvin et al., Ojard et al., and Sydanmaa et al. does not disclose using a radio resource control protocol to management radio resources and determine instructions and using an RLC entity to carry out an error check.

With respect to claims 7, 14 and 23, Shin, in the field of communications, discloses using a radio resource control protocol to management radio resources and determine instructions and using an RLC entity to carry out an error check **(See column 1 lines 16-65, column 2 lines 11-17 and Figure 1 of Shin for reference using a**

**radio resource control protocol to send instructions and for reference to using an
RLC entity to perform error detection and correction).** Using a radio resource
control protocol to management radio resources and determine instructions and using
an RLC entity to carry out an error check has the advantage of providing error
protection in a widely used GSM system.

It would have been obvious for one of ordinary skill in the art at the time of the
invention, when presented with the work of Shin, to combine using a radio resource
control protocol to management radio resources and determine instructions and using
an RLC entity to carry out an error check, as suggested by Shin, with the system and
method of Irvin et al., Ojard et al. and Sydanmaa et al., with the motivation being to
provide error protection in a widely used GSM system.

With respect to claims 8 and 24, the combination of Irvin et al., Ojard et al., and
Sydanmaa et al. does not disclose handling logical connection by an RLC entity.

With respect to claims 8 and 24, Shin, in the field of communications, discloses
handling logical connection by an RLC entity **(See column 1 line 66 to column 2 line
10 of Shin for reference using an RLC entity to control logical connections).**
Using an RLC entity to control logical connections has the advantage of providing error
protection in a widely used GSM system.

It would have been obvious for one of ordinary skill in the art at the time of the
invention, when presented with the work of Shin, to combine using an RLC entity to
control logical connections, as suggested by Shin, with the system and method of Irvin

et al., Ojard et al. and Sydanmaa et al., with the motivation being to provide error

protection in a widely used GSM system.

5.   Claims 9 and 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Irvin et al. in view of Ojard et al. and Sydanmaa et al. and in further view of Svanbro et

al. (U.S. Pat. 6967964 B1).

With respect to claims 9 and 25, the combination of Irvin et al., Ojard et al., and

Sydanmaa et al. does not disclose using a PDCP entity to separate a packet and check

for errors.

With respect to claims 9 and 25, Svanbro et al., in the field of communications,

discloses using a PDCP entity to separate a packet and check for errors **(See column 3**

line 57 to column 5 line 20 of Svanbro et al. for reference to using PDCP entities

to separate packet headers and perform error checking). Using a PDCP entity to

separate a packet and check for errors has the advantage of providing error protection

in a widely used GSM system.

It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Svanbro et al., to combine using a PDCP

entity to separate a packet and check for errors, as suggested by Svanbro et al., with

the system and method of Irvin et al., Ojard et al. and Sydanmaa et al., with the

motivation being to provide error protection in a widely used GSM system.

Allowable Subject Matter

6.   Claims 3 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7.   Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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